Midterm Lab Task 2.
Using Loops and Selection statements

Problem 1.

Create a countdown timer, where the user is prompted to enter time in seconds and will countdown to zero (set timer delay to 1) using timer.sleep(time_lapse). The program should prompt the user to test the timer if the answer is ‘y’ it will ask the user to enter time in second. If the answer is ‘n’ it will terminate the timer. Your response to y or n should be case insensitive.

Source code

```
import time;
ans = input("Start the timer[y/n]: ")
while ans == 'y':
 my_time = int(input("Enter the time in seconds: "))
 for t in range(my_time, 0, -1):
 seconds = t % 60
 minutes = (t % 3600) // 60
 hours = seconds // 3600

 print(f"{hours:02}:{minutes:02}:{seconds:02}")
 time.sleep(1)
 print("TIMES UP!!!!")

 ans = input("Try again?")

print("Thanks for using the program!")
```

Sample output

```
Start the timer[y/n]: y
Enter the time in seconds: 5
00:00:05
00:00:04
00:00:03
00:00:02
00:00:01
TIMES UP!!!!
Try again?n
Thanks for using the program!

Process finished with exit code 0
```

Problem 2.

Create an n x n Multiplication table using **Nested FOR Loop.** The user must enter the number of rows and columns that will be displayed in the Table.

Sample Output 1

```
How many rows:10
How many cols:10
                Multiplication Table

    1    2    3    4    5    6    7    8    9   10
    2    4    6    8   10   12   14   16   18   20
    3    6    9   12   15   18   21   24   27   30
    4    8   12   16   20   24   28   32   36   40
    5   10   15   20   25   30   35   40   45   50
    6   12   18   24   30   36   42   48   54   60
    7   14   21   28   35   42   49   56   63   70
    8   16   24   32   40   48   56   64   72   80
    9   18   27   36   45   54   63   72   81   90
   10   20   30   40   50   60   70   80   90  100
```

Source Code

```
num1 = int(input("Enter number of rows:"))
num2 = int(input("Enter number of cols:"))


for i in range(1, num1+1):
 for j in range(1, num2+1):
 print("\t",i * j, end='')
```

```
print("\n")
```

Sample Output

```
Enter number of rows:10
Enter number of cols:10
    1   2   3   4   5   6   7   8   9   10

    2   4   6   8   10  12  14  16  18  20

    3   6   9   12  15  18  21  24  27  30

    4   8   12  16  20  24  28  32  36  40

    5   10  15  20  25  30  35  40  45  50

    6   12  18  24  30  36  42  48  54  60

    7   14  21  28  35  42  49  56  63  70

    8   16  24  32  40  48  56  64  72  80

    9   18  27  36  45  54  63  72  81  90

    10  20  30  40  50  60  70  80  90  100
```